

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: KYLE M. HANSON ET AL.

APPLICATION NO.: 09/882,293

FILED: JUNE 15, 2001

FOR: PROCESSING TOOLS, COMPONENTS OF
PROCESSING TOOLS, AND METHOD OF MAKING
AND USING SAME FOR ELECTROCHEMICAL
PROCESSING OF MICROELECTRONIC
WORKPIECES

EXAMINER: ARUN S. PHASGE

ART UNIT: 1753

CONF. NO: 7059

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Supplemental Information Disclosure Statement
Before First Office Action after the Filing of a Request for Continued Examination
Under 37 C.F.R. § 1.114 – 37 C.F.R. § 1.97(b)(4)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

1. Timing of Submission

This information disclosure is being filed before the mailing date of a first Office action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114 [37 C.F.R. § 1.97(b)(4)]. The references listed on the enclosed Form PTO-1449 (modified) may be material to the examination of this application; the Examiner is requested to make them of record in the application.

2. Cited Information☒ Copies of the following references are enclosed:

- ☐ All cited references
- ☒ References not marked by asterisks
- ☐ The following:

☒ Copies of the following references can be found in parent U.S. Application No. 09/804,697, which issued on 12/09/2003 as Pat No. 6,660,137:

- ☐ All cited references
- ☒ References marked by asterisks
- ☐ The following:

3. Effect of Information Disclosure Statement (37 C.F.R. § 1.97(h))

This Information Disclosure Statement is not to be construed as a representation that: (i) a search has been made; (ii) additional information material to the examination of this application

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does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the cited information is, or is considered to be, material to patentability. In addition, applicant does not admit that any enclosed item of information constitutes prior art to the subject invention and specifically reserves the right to demonstrate that any such reference is not prior art.

4. Fee Payment

No fees are believed due because this Information Disclosure Statement is being filed before the mailing date of the first Office Action.

☐ Applicant further submits that no fee is due in light of the following certification under 37 C.F.R. § 1.97(e) (check only one):

☐ In accordance with 37 C.F.R. § 1.97(e)(1), the undersigned hereby states that each item of information submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement; or

☐ In accordance with 37 C.F.R. § 1.97(e)(2), the undersigned hereby states that no item of information submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c), more than three months prior to the filing of this statement.

However, should the Commissioner determine that fees are due in order for this Information Disclosure Statement to be considered, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0665.

5. Patent Term Adjustment (37 C.F.R. § 1.704(d))

☐ The undersigned states that each item of information submitted herewith was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this statement. 37 C.F.R. § 1.704(d).

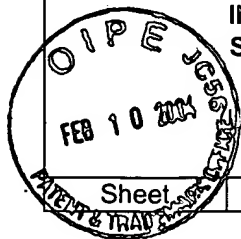
Respectfully submitted,
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Examiner Name	Arun S. Phasge
Attorney Docket No.	29195-8159US

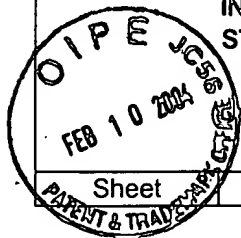
U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.	U.S. Patent or Application		Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		NUMBER	Kind Code (if known)			
		09/679,928	✓	Woodruff et al.	10/05/00	
		60/129,055	✓	McHugh	04/13/99	
		60/143,769	✓	McHugh	07/12/99	
		60/182,160	✓	McHugh et al.	02/14/00	
		60/206,663	✓	Wilson et al.	05/24/00	
		*2002/0008037		Wilson et al.	01/24/02	
		2002/0125141		Wilson et al.	09/12/02	
		2002/0139678		Wilson et al.	10/03/02	
		*1,526,644		Phinney	02/17/25	
		*1,881,713		Laukel	10/11/32	
		2,256,274		Boedecker et al.	09/16/41	
		*3,664,933		Clauss	05/1972	
		*3,706,635		Kowalski	12/1972	
		*3,716,462		Jensen	02/1973	
		*3,878,066		Dettke et al.	04/1975	
		*3,930,963		Polichette t al.	01/06/76	
		*4,000,046		Weaver	12/28/76	
		*4,046,105		Gomez	09/06/77	
		*4.134,802		Herr	01/16/79	
		*4,304,641		Grandia et al.	12/08/81	
		*4,384,930		Eckles	05/24/83	
		*4,437,943		Beck et al.	03/20/84	
		4,451,197		Lange	05/29/84	
		4,495,453		Inaba et al.	01/22/85	
		*4,500,394		Rizzo	02/19/85	
		4,566,847		Maeda et al.	01/28/86	

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Examiner Name	Arun S. Phasge
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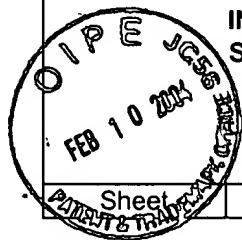
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		NUMBER	Kind Code (if known)			
		*4,576,689		Makkaev et al.	03/18/86	
		*4,634,503		Nogavich	01/06/87	
		4,639,028		Olson	01/27/87	
		*4,648,944		George et al.	03/10/87	
		4,670,126		Messer et al.	06/02/87	
		4,760,671		Ward	08/02/88	
		4,761,214		Hinman	08/02/88	
		4,770,590		Hughes et al.	09/13/88	
		*4,781,800		Goldman et al.	11/01/88	
		*4,828,654		Reed	05/09/89	
		*4,902,398		Homstad	02/20/90	
		4,944,650		Masumoto	07/31/90	
		*4,949,671		Davis et al.	08/21/90	
		*4,959,278		Shimauchi et al.	09/25/90	
		*4,988,533		Freeman et al.	01/29/91	
		*5,000,827		Schuster et al.	03/19/91	
		*5,096,550		Mayer et al.	03/17/92	
		*5,115,430		Hahne et al.	05/19/92	
		*5,135,636		Yee et al.	08/04/92	
		*5,138,973		Davis et al.	08/18/92	
		*5,151,168		Gilton et al.	09/29/92	
		5,156,174		Thompson et al.	10/20/92	
		*5,156,730		Bhatt et al.	10/20/92	
		5,178,512		Skrobak	01/12/93	
		*5,209,817		Ahmad et al.	05/11/93	
		*5,217,586		Datta et al.	06/08/93	

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		5,222,310		Thompson et al.	06/29/93	
		5,227,041		Brogden et al.	07/13/93	
		*5,256,274		Poris	10/26/93	
		*5,302,464		Nomura et al.	04/12/94	
		*5,344,491		Katou	09/06/94	
		*5,368,711		Poris	11/29/94	
		*5,372,848		Blackwell et al.	12/13/94	
		*5,376,176		Kuriyama	12/27/94	
		5,377,708		Bergman et al.	01/03/95	
		*5,391,285		Lytle et al.	02/21/95	
		5,442,416		Tateyama et al.	08/15/95	
		5,460,478		Akimoto et al.	10/24/95	
		*5,472,502		Batchelder	12/05/95	
		*5,549,808		Farooq et al.	08/27/96	
		5,571,325		Ueyama et al.	11/05/96	
		*5,597,460		Reynolds	01/28/97	
		*5,639,316		Cabral, Jr. et al.	06/17/97	
		5,670,034		Lowery	09/23/97	
		*5,681,392		Swain	10/28/97	
		*5,684,713		Asada et al.	11/04/97	
		5,700,127		Harada et al.	12/23/97	
		*5,723,028		Poris	03/03/98	
		*5,754,842		Minagawa	05/19/98	
		5,759,006		Miyamoto et al.	06/02/98	
		5,765,889		Nam et al.	06/16/98	
		5,785,826		Greenspan	07/28/98	

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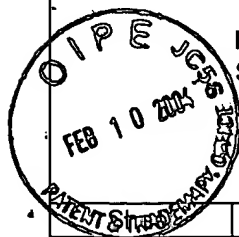
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		NUMBER	Kind Code (if known)			
		*5,871,626		Crafts et al.	02/16/99	
		*5,882,498		Dubin et al.	03/16/99	
		*5,908,543		Matsunami et al.	06/01/99	
		*5,932,077		Reynolds	08/03/99	
		5,980,706		Bleck et al.	11/09/99	
		5,985,126		Bleck et al.	11/16/99	
		*5,989,397		Laube et al.	11/23/99	
		*5,989,406		Beetz, Jr. et al.	11/23/99	
		*5,999,886		Martin et al.	12/07/99	
		6,004,828		Hanson	12/21/99	
		*6,027,631		Broadbent	02/22/00	
		*6,028,986		Song	02/22/00	
		*6,074,544		Reid et al.	06/13/00	
		*6,090,260		Inoue et al.	07/18/00	
		6,091,498		Hanson et al.	07/18/00	
		*6,110,346		Reid et al.	08/29/00	
		*6,151,532		Barone et al.	11/21/00	
		*6,156,167		Patton et al.	12/05/00	
		*6,159,354		Contolini et al.	12/12/00	
		*6,162,344		Reid et al.	12/19/00	
		*6,162,488		Gevelber et al.	12/19/00	
		6,168,695		Woodruff et al.	01/02/01	
		*6,179,983		Reid et al.	01/30/01	
		*6,193,859		Contolini et al.	02/27/01	
		*6,199,301		Wallace	03/13/01	
		*6,228,232		Woodruff et al.	05/08/01	

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		6,234,738		Kimata et al.	05/22/01	
		*6,277,263		Chen	08/21/01	
		6,322,677		Duncan	11/27/01	
		6,481,956		Hofmeister	11/19/02	
		*6,497,801		Woodruff et al.	12/24/02	

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		Office	NUMBER	Kind Code (if known)				
		WO	00/02808	✓	Semitool, Inc.	01/20/00		
		WO	*00/61498		Semitool, Inc.	10/19/00		
		WO	*00/61837		Semitool, Inc.	10/19/00		
		WO	01/90434	✓	Semitool, Inc.	11/29/01		
		WO	02/099165	✓	Semitool, Inc.	12/12/02		
		WO	02/097165	✓	Semitool, Inc.	12/05/02		
		WO	*02/02808		Semitool, Inc.	01/20/00		
		WO	*02/045476		Semitool, Inc.	06/13/02		

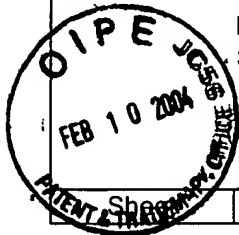
OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	T
		*LEE, TIEN-YU TOM et al., "Application of a CFD Tool in Designing a Fountain Plating Cell for Uniform Bump Plating of Semiconductor Wafers," IEEE Transactions On Components, Packaging and Manufacturing Technology – Part B, February 1996, pp 131-137, Vol 19, No. 1, IEEE	
		✓ LOWENHEIM, FREDERICK A., "Electroplating," January 1979, 12 pgs, McGraw-Hill Book Company, USA	

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		*RITTER, G., et al., "Two-And Three-Dimensional Numerical Modeling of Copper Electroplating for Advanced ULSI Metallization," June 1999, 13 pgs, E-MRS Conference Symposium M. <i>Basic Models to Enhance Reliability</i> , Strasbourg, France	
		✓ PCT International Search Report for PCT/US02/17840, Applicant: Semitool, Inc., March 2003, 5 pgs	

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